NASA POLICY DIRECTIVE

Directive: NPD 8610.7
Effective Date: February 04, 1999
Expiration Date: February 04, 2004

Responsible Office: M / Office of Space Flight

Subject: Launch Services Risk Mitigation Policy for NASA-Owned Or NASA-Sponsored Payloads

1. POLICY

a. Launch services acquired for deployment of NASA-owned, NASA-sponsored payloads must take advantage of all reasonable sources of U.S. commercial launch services, and at the same time, ensure that taxpayer-funded space-craft are not thereby exposed to excessive risk.

b. Consistent with statutory and policy direction, Government payloads will utilize U.S. launch services, unless an Office of Science and Technology Policy (OSTP) waiver is granted and/or launch on a non-U.S. vehicle is being provided at no cost to the Government as part of an international cooperative mission.

c. NASA launch services acquisition strategy shall seek to balance mission risk with launch vehicle demonstrated flight history and maturity, specifically as follows:

(1) Payloads or instruments which are classified as Risk Category 1, by the responsible Enterprise as nonmission critical and require simple interface/mission design, and/or are low-cost (e.g., university research experiments or instrumentation) may launch on --

(a) A new launch vehicle with no previous flight history; or

(b) First flight of a new configuration of a flight-proven launch vehicle incorporating a major system upgrade.

(2) Payloads or instruments which are classified as Risk Category 2, by the responsible Enterprise as collectively mission critical to implementation of NASA's Strategic Plan, require moderate complexity of mission design and integration, and/or are of moderate cost, (e.g., Small Explorers or Earth System Science Probes) may launch on --

(a) NASA-acquired launch services from qualified suppliers with at least one fully successful launch of a common vehicle, and

(b) Kennedy Space Center (KSC) verification that the demonstrated common vehicle configuration met predicted vehicle and performance parameters (e.g., within three sigma criteria).

(3) Payloads or instruments which are classified as Risk Category 3, by the

responsible Enterprise as individually mission critical to implementation of NASA`s Strategic Plan, require complex mission interface/design and/or are of high cost (e.g., Discovery or Space Station logistics) may launch on --

(a) NASA-acquired launch services from qualified suppliers with a demonstrated flight record consisting of a series of consecutive successful launches of a common vehicle configuration (i.e., 95-percent reliability @ 50-percent confidence level), and

(b) KSC verification that the common vehicle configuration has been verified to meet predicted vehicle and performance parameters (e.g., within three sigma criteria) or

(c) An onorbit services contract utilizing services from a qualified supplier will be considered on a case-by-case basis for analysis between the mission Enterprise Associate Administrator and the Office of Space Flight (OSF).

(4) In considering whether to enter into a particular cooperative mission involving the launch of a NASA payload/instrument on a foreign vehicle, NASA will pursue a similar risk assessment strategy, balancing payload mission criticality and launch vehicle maturity.

(5) Any NASA contracts which include the launch services as an integrated mission service (e.g., onorbit or turnkey service) for a NASA-funded mission shall include a provision for NASA insight into launch contractor systems engineering, processes and process control to ensure quality and reliability of launch services, and consistency with this policy.

2. APPLICABILITY

a. This policy applies to all NASA-owned or NASA-sponsored payloads/ instruments using NASA funding for purchase of launch services.

b. This policy is not applicable to payloads launched on the Space Shuttle or planned for launch on a non-U.S. launch vehicle on a no-cost basis under an already approved international cooperative agreement. Before entering into future international cooperative agreements, the Agency should consider the risk category of NASA payloads/instruments, and the demonstrated flight history and maturity of the launch vehicle proposed by the international partner.

3. AUTHORITY

a. Launch Services Purchase Act (P.L. 101-611) 42 U.S.C. § 2456d (1990).
b. NASA Authorization Act of 1988 (P.L. 100-147) 42 U.S.C. § 2459c (1987).
c. Department of Defense Authorization Act (P.L. 98-525) 10 U.S.C. § 2319 (1984).
d. Presidential Decision Directive/NTSC-4, August 5, 1994.
e. Presidential Decision Directive/NTSC-8, September 19, 1996.

4. REFERENCES

a. NPD 8730.3, NASA Quality Management System Policy (ISO 9000).
b. NPD 8610.23A, Technical Management of NASA ELV Launch Services.

5. RESPONSIBILITY

a. The Associate Administrator for Space Flight, or designee, the OSF

Director, Expendable Launch Vehicle Requirements, is responsible for the following:

(1) Coordinating, with affected Enterprise Associate Administrators, assignment of payloads to launch vehicle risk categories, consistent with this policy through the OSF Expendable Launch Vehicle (ELV) Flight Planning Board process.

(2) Approving launch service qualification requirements consistent with this policy and identification of major vehicle modifications to demonstrated launch vehicles that may warrant additional review, in coordination with the Chief Engineer and the Office of Safety and Mission Assurance.

(3) Accounting for enforcement and revision to this policy directive and for coordination of any requisite waiver requests to the National Space Transportation Launch Policy directive requiring U.S. Government payloads to be flown on vehicles manufactured in the United States.

b. The Enterprise Associate Administrators are responsible for assuring that all spacecraft Announcement of Opportunities and Request for Proposals are coordinated with the Office of Space Flight for consistency with this policy prior to publication.

c. The KSC Director is responsible for ensuring that all launch services solicitations for NASA-owned or NASA-sponsored payloads are consistent with this policy and coordinated with OSF.

d. The Marshall Space Flight Center (MSFC) Director is responsible for coordinating with KSC and OSF, definition of qualification requirements, consistent with Attachment A, for new launch vehicles for inclusion in all NASA launch services solicitations, identification of qualified suppliers, and assessment of proposal-identified vehicle compliance to the policy.

e. Center Directors are responsible for ensuring that all NASA-owned or NASA-sponsored payloads under their control obtain launch services that are consistent with the policy and are coordinated with KSC prior to contract award.

6. DELEGATION OF AUTHORITY

None.

7. MEASUREMENTS

a. OSF will maintain a record of vehicle flight history and reliability statistics for all U.S. and foreign launch vehicle suppliers.

b. MSFC will maintain and present to OSF, on an annual basis, the cost for contractor compliance and NASA implementation of the qualification requirement for NASA missions.

8. CANCELLATION

None.

/s/ Daniel S. Goldin
Administrator

ATTACHMENT A: (TEXT)

A. Qualification Requirement Matrix.

(URL for Graphic)

NASA ELV Qualification Requirements

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